

# Nidhi Kushwaha

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## Professional Profile

An enthusiastic Fuel engineering postgraduate with a passion to do multiple projects and a strong academic background in Biomass conversion and valorization, biofuels and waste to energy.

## Education

**M.Tech** Indian Institute of Technology (ISM), Dhanbad 2019-21

**Fuel Engineering (CGPA 9.139)**

**B.Tech** Banasthali Vidyapith, Jaipur 2014-18

**Chemical Engineering (64.73%)**

## Projects Undertaken

1. M.Tech thesis title: “Characterization and assessment of a hybrid fuel derived from Biochar and Refuse Derived Fuel (RDF)”
2. Btech Project: Determination of condenser efficiency in Dew Point Depression Unit (DPD) in Natural Gas plant.  
Organization: ONGC (Oil and Natural Gas Corporation)
3. Project: Design of a preheater in LPG (Liquefied Petroleum Gas) plant unit to reduce fuel gas consumption and thereby reduction in cost expenditure on fuel gas using HTRI (Heat Transfer Research Inc.)  
Organization: Gail Authority of India Limited (GAIL)  
Position: Trainee (May 2016)
4. Project: Design of pump using hydraulics sheet. Understanding the P&ID of Petrochemical plant.  
Organization: Engineers India Limited (EIL), India  
Position: Trainee (Sept-Nov 2017)

## Research Interests

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Biomass	Waste to Energy
Biofuels	MSW
Reaction Engineering	Heterogeneous Catalysis

## Computational Skills

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MATLAB	ANSYS
ASPEN	Machine Learning

## Publications

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1. Nidhi Kushwaha, Debarun Banerjee, Ejaz Ahmad, “Elucidating the role and catalytic production of lignocellulosic biomass derived butyl butyrate as jet fuel” (submitted).
2. Debarun Banerjee, Nidhi Kushwaha, Ejaz Ahmad, “Environmentally Benign and Sustainable Production of Hydrogen from Lignocellulosic Biomass Derived Compounds via Photo-reforming” (submitted).
3. Nidhi Kushwaha, Debarun Banerjee, Ejaz Ahmad, “Beginner’s guide to machine learning approaches for application in heterogeneous catalysis” (submitted).
4. Nidhi Kushwaha, Shalini Gautam, “Sustainable Prospects of Refuse Derived Fuel: Energy and Environment” (submitted).

## Manuscripts under preparation

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1. Nidhi Kushwaha, Debarun Banerjee, Ejaz Ahmad, “Insights into COVID-19 Non-Biomedical Waste Management: Composition, Current Practices and Challenges” (under preparation).
2. Debarun Banerjee, Nidhi Kushwaha, Ejaz Ahmad, “Eco-Design Strategies for recycling of E-waste” (under preparation).